Amendment Dated July 10, 2008

Reply to Office Action of April 10, 2008

<u>Amendments to the Claims:</u> This listing of claims will replace all prior versions, and listings, of claims in the application

## **Listing of Claims:**

1. (Currently Amended) A process for the manufacture of a gas diffusion electrode comprising the steps of

- a) application of applying a catalyst ink to a gas diffusion substrate to form a catalysed gas diffusion substrate;
- b) firing the catalysed gas diffusion substrate to form a fired, catalysed gas diffusion electrode;
- c) application of applying a proton-conducting polymer solution to the fired, catalysed gas diffusion electrode; and
- d) drying;

characterised in that wherein the proton-conducting polymer solution comprises a proton-conducting polymer and one or more solvents selected from the group of solvents with structure A

$$\begin{array}{c|c}
O & A \\
R^1 & C & R^2 \\
N & R^3
\end{array}$$

wherein  $R^1$ ,  $R^2$  and  $R^3$  are independently chosen from H, methyl, ethyl, n-propyl and isopropyl.

- 2. (Currently Amended) A process according to claim 1, wherein the proton-conducting polymer solution comprises one or more solvents comprises N,N-dimethylacetamide.
- 3. (Currently Amended) A process according to claim 1-or claim 2, wherein the catalyst ink comprises an electrocatalyst[[,]] and a solvent, optionally one or more binders and optionally one or more rheology modifiers.

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4. (Original) A process according to claim 3, wherein the electrocatalyst is an unsupported metal catalyst.

- 5. (Original) A process according to claim 3, wherein the electrocatalyst is a supported metal catalyst.
- 6. (Currently Amended) A process according to any preceding claim 1, wherein the catalyst ink comprises a PTFE binder.
- 7. (Currently Amended) A process according to any preceding claim 1, wherein the proton-conducting polymer solution comprises a perfluorinated polymer.
- 8. (Currently Amended) A process for the manufacture of a membrane electrode assembly comprising the steps of
  - a) application of applying a catalyst ink to a gas diffusion substrate to form a catalysed gas diffusion-electrode substrate;
  - b) firing the <u>catalysed</u> gas diffusion <u>substrate to form a fired, catalysed gas diffusion</u> electrode;
  - c) application of applying a proton-conducting polymer solution to the <u>fired</u>, catalysed gas diffusion electrode to form a gas diffusion electrode; and
  - d) optionally drying the gas diffusion electrode; and
  - e)—combining the gas diffusion electrode with a proton conducting polymer membrane

characterised in that wherein the proton-conducting polymer solution contains comprises a proton-conducting polymer and one or more solvents selected from the group of solvents with structure A

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wherein R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> are independently chosen from H, methyl, ethyl, n-propyl and isopropyl.

- 9. (Currently Amended) A process according to claim 8 wherein, the proton-conducting polymer solution comprises one or more solvents comprises N,N-dimethylacetamide.
- 10. (Currently Amended) A process according to claim 8-or-claim 9, wherein the catalyst ink comprises an electrocatalyst[[,]] and a solvent, optionally one or more binders and optionally one or more rheology modifiers.
- 11. (Original) A process according to claim 10, wherein the electrocatalyst is an unsupported metal catalyst.
- 12. (Original) A process according to claim 10, wherein the electrocatalyst is a supported metal catalyst.
- 13. (Currently Amended) A process according to any one of claims 8 to 12 claim 8, wherein the catalyst ink comprises a PTFE binder.
- 14. (Currently Amended) A process according to any one of claims 8 to 13 claim 8, wherein the proton-conducting polymer solution comprises a perfluorinated polymer.
- 15. (New) A process according to claim 3, wherein the catalyst ink further comprises one or more binders.
- 16. (New) A process according to claim 3, wherein the catalyst ink further comprises one or more rheology modifiers.
- 17. (New) A process according to claim 15, wherein the catalyst ink further comprises one or more rheology modifiers.
- 18. (New) A process according to claim 8 further comprising, between steps c) and d), drying the gas diffusion electrode.
- 19. (New) A process according to claim 8, wherein the catalyst ink further comprises one or more binders.

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20. (New) A process according to claim 8, wherein the catalyst ink further comprises one or more rheology modifiers.

21. (New) A process according to claim 20, wherein the catalyst ink further comprises one or more rheology modifiers.